

THAT CLAIMED IS:

1. An apparatus for communicating with law enforcement during vehicle travel, the apparatus comprising:

5 a first computer defining a department server in communication with at least one law enforcement database to supply law enforcement data to officers positioned in vehicles located remote from the department server;

10 a vehicle computer positioned within a law enforcement vehicle in communication with the department server and in communication with at least one audio speaker;

15 mobile data communications software stored on the vehicle computer to facilitate officer communication with the department server through the vehicle computer and to transmit and receive law enforcement data from the at least one law enforcement database through the department server; and

20 officer communication enhancing software stored on the vehicle computer and in communication with the mobile data communications software to enhance officer communication with the department server through the vehicle computer, the officer communications enhancing software including an audio communicator positioned to
25 transmit enhanced audio law enforcement data received from the mobile data communications software to the officer through the at least one audio speaker, the enhanced audio law enforcement data including a plurality of preselected and prerecorded audio messages
30 responsive to the law enforcement data received from the mobile data communications software.

2. An apparatus as defined in Claim 1, wherein the audio communicator further includes an audio alarm generator positioned to transmit a plurality of audio alarms to the officer responsive to preselected law
5 violation data received from the mobile data communications software, each of the plurality of audio alarms being associated with a preselected degree of law violation.

3. An apparatus as defined in Claim 2, wherein the plurality of audio alarms includes a plurality of alert tones, the plurality of alert tones including a short tone and a long tone.

4. An apparatus as defined in Claim 3, wherein the vehicle computer includes an officer display positioned to display data to the officer, and wherein the officer communications enhancing software further
5 includes a form completing enhancer to generate and populate a plurality of preselected incident forms, the form completing enhancer including at least one form database including a plurality of preselected incident forms, a form display graphical user interface in
10 communication with the form database to graphically display one of the preselected incident forms to the officer, and a form enhancing populator in communication with the mobile data communications software to receive the law enforcement data therefrom.

5. An apparatus as defined in Claim 4, wherein each of the plurality of preselected incident forms of the form database includes a plurality of incident form data fields including prepopulated data fields and
5 officer interface populated data fields, the number of the plurality of the prepopulated data fields being

substantially larger than the number of officer populated data fields, the prepopulated data fields including vehicle incident data fields and vehicle officer data fields, and wherein the form enhancing populator only populates the prepopulated data fields of each of the plurality of preselected incident forms.

6. An apparatus as defined in Claim 5, further including a high impact printer in communication with the vehicle computer to print data from the plurality of data fields to a preselected incident form having data field locations substantially corresponding to the plurality of data fields being displayed to the officer by the graphical user interface, the preselected incident form being a separate form having a plurality of form layers, the plurality of form layers including a first form layer having a first form data field layout and a second form layer underlying the first form layer and having a second data field form layout, the second data field form layout being substantially the same as the first form layer data field layout so that when the separate form is fed through the printer the high impact printer prints data on the first form layer and by impact also prints into the underlying second form layer.

7. An apparatus as defined in Claim 5, wherein the plurality of vehicle incident data forms includes at least one of the following: at least one citation form, at least one accident form, at least one towing form, and at least one warning form.

8. An apparatus as defined in Claim 5, wherein the officer populated data fields include a plurality of statute citation data fields, and wherein the

graphical user interface further includes a statute
5 display menu having a plurality of preselected statute
violations responsive to the officer to display to the
officer to thereby allow the officer to select one of
the plurality of preselected statute violations to be
readily prepopulated into the plurality of statute
10 citation data fields.

9. An apparatus as defined in Claim 8, wherein
at least one of the plurality of preselected incident
forms includes a plurality of form portions, a first
form portion of the plurality of form portions being
5 required to be completed and other form portions of the
plurality of form portions being optionally completed,
each of the plurality of form portions having a
separate plurality of accident data fields including a
plurality of prepopulated data fields and a plurality
10 of officer populated data fields.

10. An apparatus as defined in Claim 9, wherein
the officer communication enhancing software further
includes a quick mapper responsive to officer call
dispatch data including an incident location received
5 from the mobile data communications software to quickly
generate and display a top plan street view map of the
incident location.

11. An apparatus as defined in Claim 10, wherein
the quick mapper includes a map database having mapping
data stored therein, a map applicator in communication
with the map database to generate a map responsive to
5 the incident location data, and a map applicator
initiator in communication with the map applicator and
the mobile data communications software to receive the
officer call dispatch data and to communicate the

incident location to the map applicator to thereby
10 generate the top plan street view map of the incident
location.

12. An apparatus as defined in Claim 11, wherein
the high impact printer includes a first printer, the
apparatus further includes a second non-impact printer
also positioned in communication with the vehicle
5 computer to print preselected incident forms and a
printer selector responsive to the officer to send a
form desired to be printed to a selected one of the
first and second printers.

13. Officer communications enhancing software
stored on a vehicle computer and in communication with
mobile data communications software stored on the
vehicle computer to enhance officer communication with
5 the department server through the vehicle computer in
communication with at least one audio speaker, the
officer communications enhancing software comprising:
an audio communicator positioned to transmit
enhanced audio law enforcement data received from the
10 mobile data communications software to the officer
through the at least one audio speaker, the enhanced
audio law enforcement data including a plurality of
preselected and prerecorded audio messages responsive
to the law enforcement data received from the mobile
15 data communications software.

14. Software as defined in Claim 13, wherein the
audio communicator includes an audio alarm generator
positioned to transmit a plurality of audio alarms to
the officer responsive to preselected law violation
5 data received from the mobile data communications
software, each of the plurality of audio alarms being

associated with a preselected degree of law violations.

15. Software as defined in Claim 14, wherein the plurality of audio alarms includes a plurality of alert tones, the plurality of alert tones including a short tone and a long tone.

16. Software as defined in Claim 15, wherein the vehicle computer includes an officer display positioned to display data to the officer, and wherein the officer communications enhancing software further includes a
5 form completing enhancer to generate and populate a plurality of preselected incident forms, the form completing enhancer including at least one form database including a plurality of preselected incident forms, a form display graphical user interface in
10 communication with the form database to graphically display one of the preselected incident forms to the officer, and a form enhancing populator in communication with the mobile data communications software to receive the law enforcement data therefrom.

17. Software as defined in Claim 16, wherein each of the plurality of preselected incident forms of the form database includes a plurality of incident form data fields including prepopulated data fields and
5 officer interface populated data fields, the number of the plurality of the prepopulated data fields being substantially larger than the number of officer populated data fields, the prepopulated data fields including vehicle incident data fields and vehicle
10 officer data fields, and wherein the form enhancing populator only populates the prepopulated data fields of each of the plurality of preselected incident forms.

18. Software as defined in Claim 17, wherein the plurality of vehicle incident data forms includes at least one citation form, at least one accident form, at least one towing form, and at least one warning form.

19. Software as defined in Claim 18, wherein the officer populated data fields include a plurality of statute citation data fields and wherein the graphical user interface further includes a statute display menu
5 having a plurality of preselected statute violations responsive to the officer to display to the officer to thereby allow the officer to select one of the plurality of preselected statute violations to be readily prepopulated into the plurality of statute
10 citation data fields.

20. Software as defined in Claim 19, wherein the at least one accident form includes a plurality of form portions, a first form portion of the plurality of form portions being required to be completed and other form
5 portions of the plurality of form portions being optionally completed, each of the plurality of form portions having a separate plurality of accident data fields including a plurality of prepopulated data fields and a plurality of officer populated data
10 fields.

21. Software as defined in Claim 20, wherein the officer communication enhancing software further includes a quick mapper responsive to officer call dispatch data including an incident location received
5 from the mobile data communications software to quickly generate and display a top plan street view map of the incident location.

22. Software as defined in Claim 21, wherein the quick mapper includes a map database having a plurality of maps stored therein, a map applicator in communication with the map database to generate a map
5 responsive to the incident location data, and a map applicator initiator in communication with the map applicator and the mobile data communications software to receive the officer call dispatch data and to communicate the incident location to the map applicator
10 to thereby generate the top plan street view map of the incident location.

23. Officer communications enhancing software stored on a vehicle computer having an officer display connected thereto and in communication with mobile data communications software stored on the vehicle computer
5 to enhance officer communication with the department server through the vehicle computer, the officer communications enhancing software comprising:

a form completing enhancer to generate and populate a plurality of preselected incident forms on
10 an officer display attached to the vehicle computer, the form completing enhancer including at least one form database including a plurality of preselected incident forms, a form display graphical user interface in communication with the form database to graphically
15 display one of the preselected incident forms to the officer, and a form enhancing populator in communication with the mobile data communications software to receive the law enforcement data therefrom.

24. Software as defined in Claim 23, wherein each of the plurality of preselected incident forms of the form database includes a plurality of incident form data fields including prepopulated data fields and

5 officer interface populated data fields, the number of
the plurality of the prepopulated data fields being
substantially larger than the number of officer
populated data fields, the prepopulated data fields
including vehicle incident data fields and vehicle
10 officer data fields, and wherein the form enhancing
populator only populates the prepopulated data fields
of each of the plurality of preselected incident forms.

25. Software as defined in Claim 24, further
including a high impact printer wherein the vehicle
computer is in communication with print data from the
plurality of data fields to a preselected incident form
5 having data field locations substantially corresponding
to the plurality of data fields being displayed to the
officer by the graphical user interface, the
preselected incident form being a separate form having
a plurality of form layers, the plurality of form
10 layers including a first form layer having a first form
data field layout and a second form layer underlying
the first form layer and having a second data field
form layout, the second data field form layout being
substantially the same as the first form layer data
15 field layout so that when the separate form is fed
through the printer the high impact printer prints data

26. Software as defined in Claim 25, wherein the
plurality of vehicle incident data forms includes at
least one citation form, at least one accident form, at
least one towing form, and at least one warning form.

27. Software as defined in Claim 26, wherein the
officer populated data fields include a plurality of
statute citation data fields and wherein the graphical
user interface further includes a statute display menu

5 having a plurality of preselected statute violations
responsive to the officer to display to the officer to
thereby allow the officer to select one of the
plurality of preselected statute violations to be
readily prepopulated into the plurality of statute
10 citation data fields.

28. Software as defined in Claim 27, wherein the
at least one accident form includes a plurality of form
portions, a first form portion of the plurality of form
portions being required to be completed and other form
5 portions of the plurality of form portions being
optionally completed, each of the plurality of form
portions having a separate plurality of accident data
fields including a plurality of prepopulated data
fields and a plurality of officer populated data
10 fields.

29. Software as defined in Claim 28, wherein the
officer communication enhancing software further
includes a quick mapper responsive to officer call
dispatch data including an incident location received
5 from the mobile data communications software to quickly
generate and display a top plan street view map of the
incident location.

30. Software as defined in Claim 29, wherein the
quick mapper includes a map database having a plurality
of maps stored therein, a map applicator in
communication with the map database to generate a map
5 responsive to the incident location data, and a map
applicator initiator in communication with the map
applicator and the mobile data communications software
to receive the officer call dispatch data and to
communicate the incident location to the map applicator

10 to thereby generate the top plan street view map of the
incident location.

31. Software as defined in Claim 30, further
including officer communications enhancing software
stored on the vehicle computer and in communication
with mobile data communications software to enhance
5 officer communication with the department server
through the vehicle computer in communication with at
least one audio speaker, the officer communications
enhancing software including an audio communicator
positioned to transmit enhanced audio law enforcement
10 data received from the mobile data communications
software to the officer through the at least one audio
speaker, the enhanced audio law enforcement data
including a plurality of preselected and prerecorded
audio messages responsive to the law enforcement data
15 received from the mobile data communications software.

32. Software as defined in Claim 31, further
including an audio alarm generator positioned to
transmit a plurality of audio alarms to the officer
responsive to preselected law violation data received
5 from the mobile data communications software, each of
the plurality of audio alarms being associated with a
preselected degree of law violation.

33. Software as defined in Claim 33, wherein the
plurality of audio alarms includes a plurality of alert
tones, the plurality of alert tones including a short
tone and a long tone.

34. Officer communications enhancing software
stored on a vehicle computer having an officer display
connected thereto and in communication with mobile data

communications software stored on the vehicle computer
5 to enhance officer communication with a law enforcement
department server through the vehicle computer, the
officer communications enhancing software comprising:
a quick mapper responsive to officer call dispatch
data including an incident location received from the
10 mobile data communications software to quickly generate
and display a top plan street view map of the incident
location, the quick mapper including a map database
having a plurality of maps stored therein, a map
applicator in communication with the map database to
15 generate a map responsive to the incident location
data, and a map applicator initiator in communication
with the map applicator and the mobile data
communications software to receive the officer call
dispatch data and to communicate the incident location
20 to the map applicator to thereby generate the top plan
street view map of the incident location.

35. Software as defined in Claim 34, wherein the
vehicle computer is further positioned in communication
with at least one audio speaker, and the officer
communications enhancing software further comprising an
5 audio communicator positioned to transmit enhanced
audio law enforcement data received from the mobile
data communications software to the officer through the
at least one audio speaker 43, the enhanced audio law
enforcement data including a plurality of preselected
10 and prerecorded audio messages responsive to the law
enforcement data received from the mobile data
communications software.

36. Software as defined in Claim 35, further
including an audio alarm generator positioned to
transmit a plurality of audio alarms to the officer

responsive to preselected law violation data received
5 from the mobile data communications software, each of
the plurality of audio alarms being associated with a
preselected degree of law violations.

37. Software as defined in Claim 36, wherein the
plurality of audio alarms includes a plurality of alert
tones, the plurality of alert tones including a short
tone and a long tone.

38. Software as defined in Claim 37, further
including a form completing enhancer to generate and
populate a plurality of preselected incident forms, the
form completing enhancer including at least one form
5 database including a plurality of preselected incident
forms, a form display graphical user interface in
communication with the form database to graphically
display one of the preselected incident forms to the
officer, and a form enhancing populator in
10 communication with the mobile data communications
software to receive the law enforcement data therefrom.

39. Software as defined in Claim 38, wherein each
of the plurality of preselected incident forms of the
form database includes a plurality of incident form
data fields including prepopulated data fields and
5 officer interface populated data fields, the number of
the plurality of the prepopulated data fields being
substantially larger than the number of officer
populated data fields, the prepopulated data fields
including vehicle incident data fields and vehicle
10 officer data fields, and wherein the form enhancing
populator only populates the prepopulated data fields
of each of the plurality of preselected incident forms.

40. Software as defined in Claim 39, wherein the plurality of vehicle incident data forms includes at least one citation form, at least one accident form, at least one towing form, and at least one warning form.

41. Software as defined in Claim 40, wherein the officer populated data fields include a plurality of statute citation data fields and wherein the graphical user interface further includes a statute display menu
5 having a plurality of preselected statute violations responsive to the officer to display to the officer to thereby allow the officer to select one of the plurality of preselected statute violations to be readily prepopulated into the plurality of statute
10 citation data fields.

42. Software as defined in Claim 41, wherein the at least one accident form includes a plurality of form portions, a first form portion of the plurality of form portions being required to be completed and other form
5 portions of the plurality of form portions being optionally completed, each of the plurality of form portions having a separate plurality of accident data fields including a plurality of prepopulated data fields and a plurality of officer populated data
10 fields.

43. A method of enhancing communication with a law enforcement officer positioned in a law enforcement vehicle, the method comprising:

detecting law enforcement data received from a law
5 enforcement database in communication with the vehicle;
parsing the detected law enforcement data for preselected data fields; and
audio announcing preselected and prerecorded audio

messages responsive to data within the preselected data
10 fields.

44. The method as defined in Claim 43, further comprising indicating levels of law violation and transmitting an audio alarm to the officer corresponding to the level of indicated law violation.

45. A method of enhancing communication with a law enforcement officer positioned in a law enforcement vehicle, the method comprising:

detecting law enforcement data received from a law
5 enforcement database in communication with the vehicle;

parsing the detected law enforcement data for preselected data fields; and

populating preselected data fields in a incident form on the vehicle computer with the preselected data.

46. The method as described in Claim 45, the method further comprising populating a plurality of preselected data fields in an incident form with data stored on the vehicle computer responsive to the
5 officer populating a single data field.

47. The method as described in Claim 46, the method further comprising printing the incident form using a high impact printer located in the vehicle and in communication with the vehicle computer.

48. A method of enhancing communication with a law enforcement officer positioned in a law enforcement vehicle, the vehicle having a vehicle computer positioned therein and in communication with a
5 department server, the method comprising:

detecting incident location data received in a

dispatch transmission to the vehicle computer from the department server;

- generating a map of an incident location
- 10 responsive to the incident location data; and
- displaying the map responsive to an officer request for map data.

49. A method as described in Claim 48, wherein the map of the incident location is a top plan street view map.

50. A method as described in Claim 48, the method further comprising importing the incident location data into a preexisting map database and then displaying a map from the map database.